

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently amended): An arrangement comprising a light-emitting power semiconductor device disposed on a metallic substrate structure and comprising a plastic protective body, which
 - is formed by injection onto said substrate structure and
 - shrouds said power semiconductor device substantially form-fittingly on the sides and top thereof, leaving a light exit region exposed, and comprising an optical waveguide that is coupled to said light-emitting power semiconductor device and that guides the emitted light out of said plastic protective body, characterized in that
 - the region between said light-emitting power semiconductor device and said optical waveguide is filled, at least segmentally, with a transparent plastic material and filler particles are dispersed in said plastic protective body.
2. (Currently amended): The arrangement as recited in claim 1, characterized in that said filler particles dispersed in said plastic protective body are present in order to adjust the thermomechanical properties of the material of said plastic protective body to the thermal expansion of said power semiconductor device.
3. (Previously presented): The arrangement as recited in claim 1, characterized in that said plastic protective body is made of a substantially opaque plastic material.
4. (Previously presented): The arrangement as recited in claim 1, characterized in that

said plastic protective body is made of a thermoplast or a duroplast.

5. (Previously presented): The arrangement as recited in claim 1, characterized in that said substrate structure is a singulated part made from a panel-shaped or strip-shaped metal sheet.
6. (Previously presented): The arrangement as recited in claim 1, characterized in that said substrate structure is in thermal contact with a coolant which flows around or across at least a portion of its surface.
7. (Previously presented): The arrangement as recited in Claim 6, characterized in that said substrate structure is provided with a heat-exchange body comprising microchannels and/or microplates.
8. (Previously presented): The arrangement as recited in claim 7, characterized in that said heat-exchange body is disposed in the immediate vicinity of said power semiconductor device, on the side of said substrate structure (1) facing away from said power semiconductor device.
9. (Previously presented): The arrangement as recited in claim 1, characterized in that said optical waveguide is provided on both of its longitudinal faces with a coating for beam guidance.
10. (Previously presented): The arrangement as recited in claim 1, characterized in that an optical waveguide structure creating a plurality of individual optical waveguides is formed in said waveguide.
11. (Original): The arrangement as recited in claim 10, characterized in that

with respect to an individual optical waveguide, the cross-sectional areas of the optical inlet and the optical exit differ in size, and/or,

with respect to plural individual optical waveguides, the geometrical arrangement of the cross-sectional areas of the optical inlets is different from the geometrical arrangement of the cross-sectional areas of the exits.

12. (Previously presented): The arrangement as recited in claim 1, characterized in that to effect the optical coupling of said optical waveguide to said light-emitting power semiconductor device, a particularly reflective or diffractive lens is provided in the beam path between said power semiconductor device and said optical waveguide.
13. (Previously presented): The arrangement as recited in claim 12, characterized in that said lens realized as a cylindrical lens.
14. (Previously presented): The arrangement as recited in claim 1, characterized in that said transparent plastic material is silicone.
15. (Previously presented): The arrangement as recited in claim 1, characterized in that said light-emitting power semiconductor device is a semiconductor laser.
16. (Previously preented): A method for fabricating an arrangement comprising a light-emitting power semiconductor device, wherein,
 - in a first step, said light-emitting power semiconductor device is placed against and electrically contacted by a substrate structure, and
 - in a second step that can be performed chronologically before or after the first step, an optical waveguide is affixed to said substrate structure, and

in a third step, said substrate structure with said light-emitting power semiconductor device is injection-coated with a plastic mass forming a plastic protective body, characterized in that

in the third step, said optical waveguide is completely shrouded in said plastic protective body, and

in a fourth step, a light exit surface of said optical waveguide is exposed in the region of the outer periphery of said plastic protective body.

17. (Previously presented): The method as recited in claim 16, characterized in that
said substrate structure is realized, at least in said first step, as a mounting area in a planar metal sheet, and the separation of the metal sheet into the individual arrangements is effected in a subsequent singulating step.
18. (Previously presented): The method as recited in claim 16, characterized in that
as part of the fourth step, a projecting piece of plastic material integrally formed on said plastic protective body is broken off to expose said light exit surface of said optical waveguide.
19. (Previously presented): The method as recited in claim 16, characterized in that
after said fourth step, the exposed light exit surface of said optical waveguide is polished.
20. (Previously presented): The arrangement as recited in claim 2, characterized in that
the filler particles are glass particles.
21. (Previously presented): The arrangement as recited in claim 5, characterized in that
said substrate structure (1) is a stamped part.

22. (Previously presented): The arrangement as recited in claim 5, characterized in that said substrate structure (1) is made from a lead frame.
23. (Previously presented): The arrangement as recited in claim 6, characterized in that said coolant is water.
24. (Previously presented): The arrangement as recited in claim 9, characterized in that said coating is a SiO₂ coating.
25. (Previously presented): The arrangement as recited in claim 15, characterized in that said light-emitting power semiconductor device (3) is a semiconductor laser bar.